10/506770
Rec'd PCT/PTO 0 3 SEP 2004

DESCRIPTION

PORTABLE BOOKSTAND

Technical Field

The present invention relates to a foldable, portable bookstand.

Background Art

Conventional bookstands, even if they are called "portable", have a large book mounting plate. Thus, no conventional bookstands are compact enough to carry by hand.

In view of this, the present invention provides a foldable bookstand having a novel mechanism. This mechanism makes the book mounting plate and page mounting clips more compact than any conventional bookstand so that the bookstand is easily carried by hand.

Disclosure of the Invention

The book mounting plate of the conventional bookstand is a rectangular plate of a size substantially as large as an opened book. The bookstand of the present invention has a horizontal member and a rotatable member crossing each other to support a book. The rotatable member and horizontal member have substantially the same size, having an elongated rectangular shape. The rotatable member superposed on the horizontal member can rotate about a support shaft provided at the center of the horizontal member. The rotatable member can also slide relative to the horizontal member, and the sliding movement is limited by the support shaft.

The horizontal member has transparent binders at right and left ends thereof to clamp right and left pages of a book. Each binder has guide rods that slide long grooves formed in the horizontal member. Right and left pedestals are provided at a back face of the horizontal member such that the pedestals can pivot and extend from a retracted position.

The above described four parts of the bookstand of the present invention can be folded within an area of the horizontal member. Thus, the bookstand can become very compact.

Brief Description of the Drawings

Figure 1 is a front view of a bookstand;

Figure 2 illustrates a plan view of the bookstand when horizontal and rotatable members extend perpendicularly;

Figure 3 illustrates a lateral view of the bookstand when placed on a desk; and

Figure 4 illustrates the bookstand attached to a holder.

Best Mode For Carrying Out the Invention

Figure 1 is a front view of a portable bookstand of the present invention in a folded condition. In Figure 1, four parts of the bookstand (i.e., a horizontal member 1, a rotatable member 2, transparent binders 3 and pedestals 4) are sequentially stacked.

Two parallel guide rods 5 are fixed to each transparent binder 3, and slide along grooves formed in the horizontal member. Thus, the transparent binders can move to right and left positions (i.e., to an open position and a closed position).

A shaft 6 is provided at the center of the horizontal member 1. The rotatable member 2 has a groove 7 which extends in the upper half of the rotatable member. The groove of the rotatable member 2 slidably engages with the shaft 6 of the horizontal member 1. In order to prevent disengagement between the rotatable member and the horizontal member, the head of the shaft 6 is greater than the groove of the rotatable member 2.

The groove 7 of the rotatable member 2 has an end hole 13 larger than the width of the groove 7 so that the rotatable member 2 can rotate when the center of the rotatable member 2 matches the center of the horizontal member 1. When the rotatable member 2 rotates 90 degrees, the groove 7 can slide, with the shaft 6 being engaged with the groove 7. (Figure 2)

When the bookstand of the present invention has to support a book, the transparent binders 3 are pulled to the right and left and the rotatable member is rotated 90 degrees so that the rotatable member extends perpendicularly to the horizontal member. A book 11 can be placed on the crisscross structure of the rotatable member and horizontal member, and right and left pages of the book are pressed down by the transparent binders. The pedestals 4 are extended to the right and left "open" positions from the ends of the horizontal member, and the bookstand is put on the desk. The lower end of the rotatable member and the right and left pedestals are in contact with the desk so that the bookstand can stand diagonally. (Figure 3).

The rotatable member 2 has a stopper 12 to support the lower end of the book at the lower end thereof.

The rotatable member has continuous teeth 8 on its lateral faces. The teeth 8 engage with claws 14 of the holder 9 so that the holder can support the crossing portion of the horizontal member and the rotatable member. Since the holder 9 fixes the rotatable member and horizontal member, as shown in Figure 4, the bookstand of the present invention can be attached to an arm 10.

By attaching the bookstand to the arm 10, the book is supported in the air without occupying any area on the desk. The bookstand of the present invention can be used by a person in bed.

Industrial Applicability

The bookstand becomes greatly compact and easy to carry. This significantly improves usefulness of the bookstand.

By using the bookstand, a person does not have to use hands to hold a book. The person therefore can use hands to only operate, for example, a computer. The person can concentrate on reading. The person can read a book in a desired posture. This prevents eye fatigue, headache, sholderache, etc.

C L A I M S

1. A portable bookstand wherein a horizontal member (1) and a rotatable member (2) have an elongated rectangular shape of substantially the same size, and the rotatable member superposed on the horizontal member can rotate and slide about a shaft (6) provided at the center of the horizontal member,

wherein transparent binders (3) for pressing down right and left pages of a book are fixed to guide rods (5) which move along grooves in the horizontal member (1), so that the transparent binders can extend and retract in the right and left directions of the horizontal member, and

wherein pedestals (4) are provided on a back face of the horizontal member such that the pedestals can move between an open position and a closed position.

2. The rotatable member (2) has continuous teeth (8) on its lateral faces.

A B S T R A C T

The base of a conventional bookstand on which to support a book is a rectangular base having an area substantially as large as an opened book whereas the invention employs a method of placing a book on a crisscross form defined by a horizontal base and a vertical base crossing each other. The horizontal and vertical bases are in the form of elongated rectangles of substantially the same size, and the vertical base placed on the horizontal base is supported for slide turning movement around a support shaft of the horizontal base. On the right and left sides of the horizontal base, the right and left side pages of a book are held down by transparent page binders having guide rods slidable in guide grooves formed inside the horizontal base. An opening/closing stand is provided on the back surface of the horizontal base. The bookstand of the invention has the four parts laminatable in the plane of the horizontal base so as to reduce the size.

FIG. 1

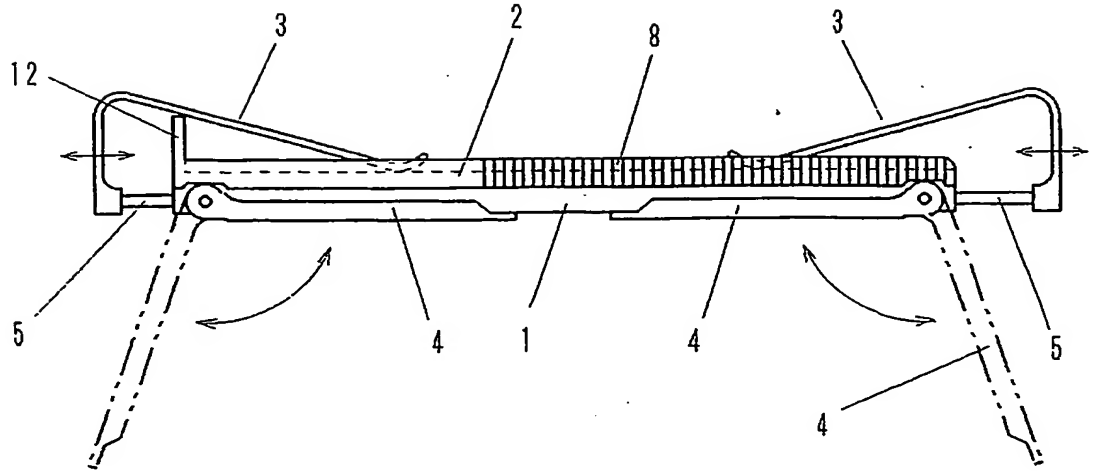
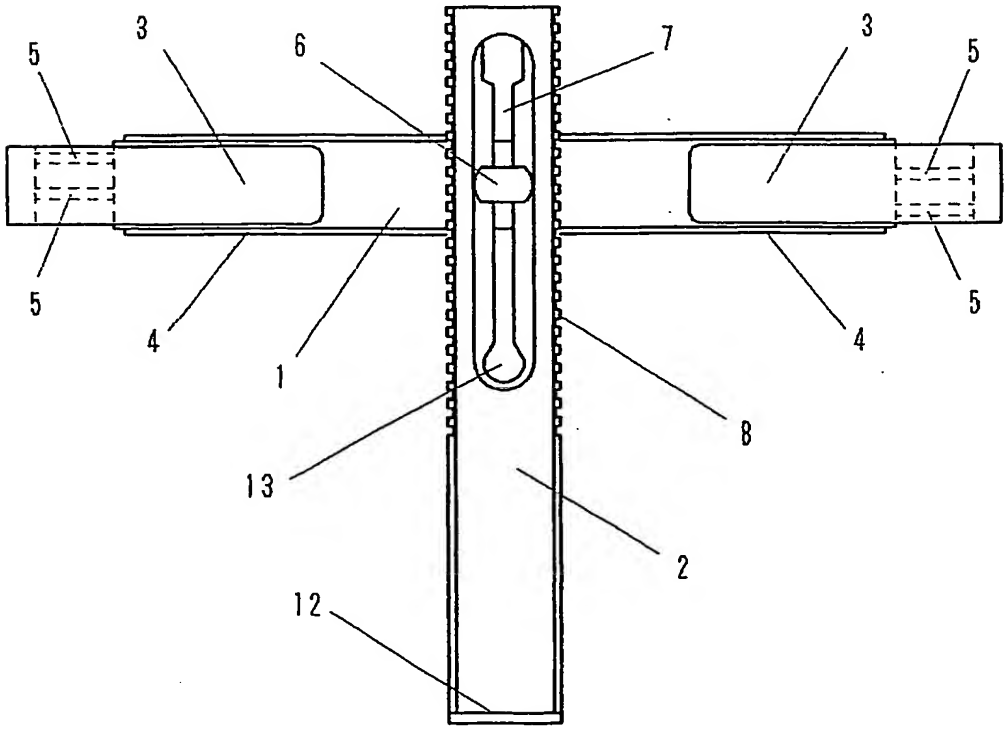


FIG. 2



Best Available Copy

FIG. 3

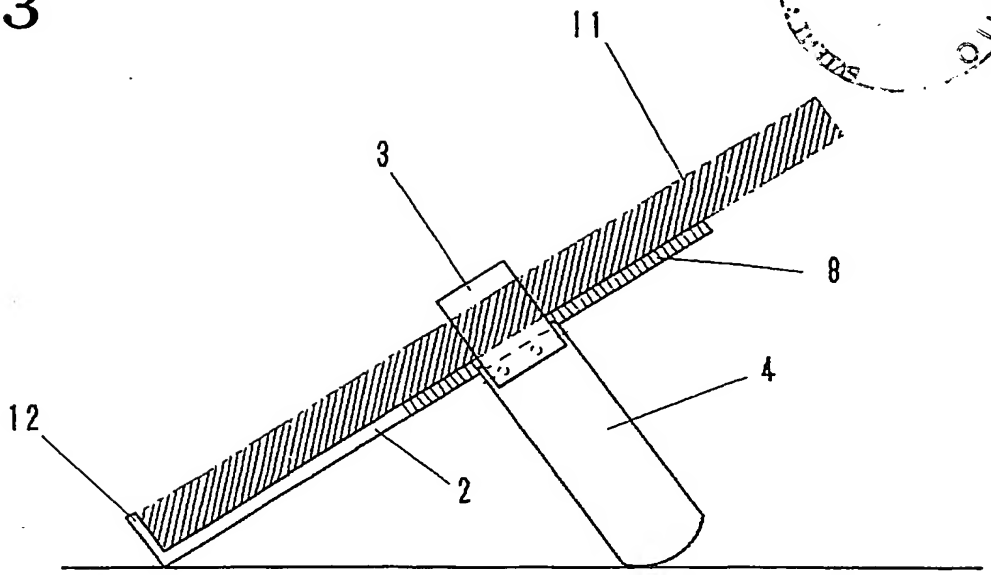
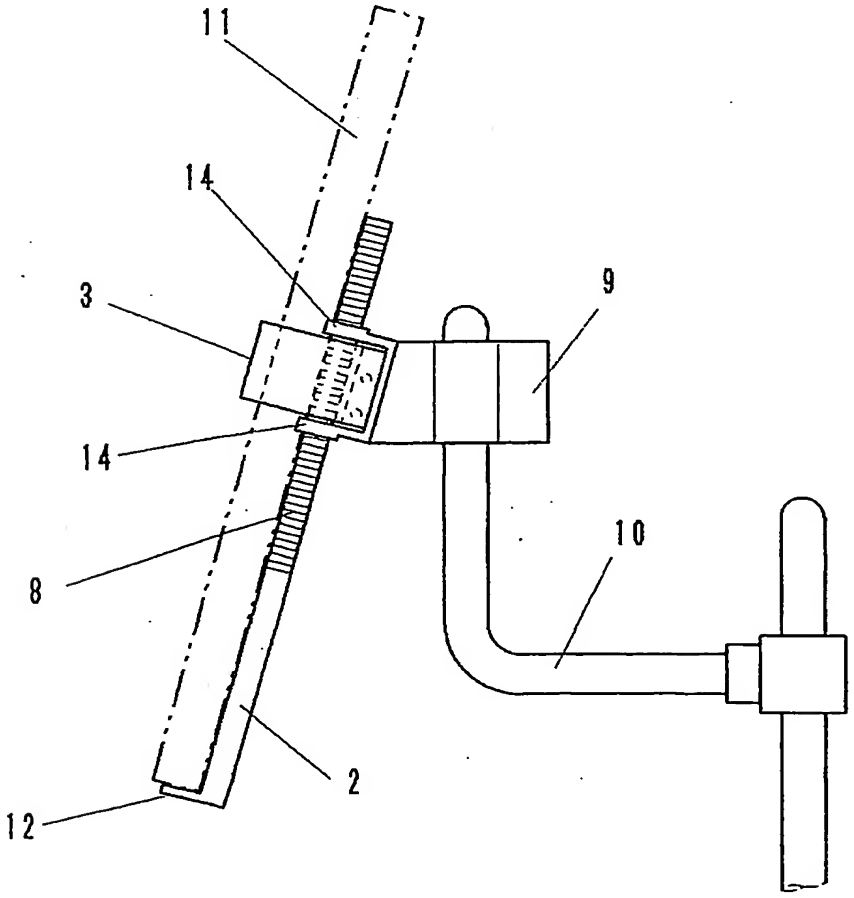


FIG. 4



Best Available Copy